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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,171	12/09/2005	Yukio Aoki	09852/0203745-US0	1361

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EXAMINER	
ABU ALI, SHUANGYI	
ART UNIT	PAPER NUMBER
1793	

MAIL DATE	DELIVERY MODE
01/05/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,171	AOKI, YUKIO	
	Examiner	Art Unit	
	SHUANGYI ABU ALI	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Claim1 and 3-4 remain for examination wherein claim 1 is amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 and 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iio et al. (US5725932).

I In regards to claim 1, Iio teaches a WC based cemented carbide comprising 2-15 wt% Co and/or Ni as a binding phase, 0.2-20 wt% Ti and Ta, and a W-Ti-Ta-C (beta-t) phase (see col 7, ln 55-66) and W-Ti-Ta-C-N solid solution (see col 7, ln 45-48). The reference further teaches that Ta may be replaced entirely or in part by Nb (see col 8, ln 22-23). Thus, the reference teaches a composition which overlaps with the instantly

claimed ranges. It would have been obvious to one of ordinary skill in the art to select from the portion of the overlapping ranges. Overlapping ranges have been held to establish prima facie obviousness (see MPEP 2144.05). As the reference teaches replacing 0-100 wt% of the Ta with Nb, this leads to a range of 0-1, overlapping with the instantly claimed expression. Iio et al. disclose that the WC-based cement carbide is obtained by the sintering powder of WC, TiC, TAC and Co. Ta can be replaced entirely or in part by NB. Ta amount is set to 20%. Iio et al. teaches that the powder composition is substantial similar to that of the instant application, therefore, the similar result (final product) would be expected (the beta-t solid solution comprises TiC, TiN, Ta carbonitride and Nb carbonitride) since the powder is subjected to the similar treatment. Finally, the claim limitations regarding "for a surface coated gear cutting tool [sic]" are regarded as statements of intended use. While intended use recitations cannot be entirely disregarded, the intended use must result in a structural difference between the claimed invention and the prior art in order to distinguish the claimed invention over the prior art. The prior art in this case, does teach the use of the materials for forming hard surface coatings of cutting tools (see col 1, 6-15), and therefore meets the instant claim.

In regards to claim 3, although the reference is silent to the specific fracture toughness of the material at room temperature, the references teach a material having substantially the same composition and method of making the composition, thus it would necessarily follow that the composition would possess the same properties as instantly claimed.

In regards to claim 4, Iio teaches the use of the WC based cemented carbide for forming hard surface coatings of cutting tools (see col 1, 6-15).

Response to Arguments

Applicant's arguments filed 06/04/2009 have been fully considered but they are not persuasive. Therefore, the grounds of rejection for claims 1 and 3-4 as indicated in the previous Office Action stand.

The applicant argues that the Iio fail to teach the beta-t solid solution comprising TiC, TiN, Ta, carbonitride and Nb carbonitride. The Examiner respectfully submits that Iio et al. disclose that the WC-based cement carbide is obtained by the sintering powder of WC, TiC, TAC and Co. Ta can be replaced entirely or in part by NB. Ta amount is set to 20%. Iio et al. teaches that the powder composition is substantial similar to that of the instant application, therefore, the similar result (final product) would be expected (the beta-t solid solution comprises TiC, TiN, Ta carbonitride and Nb carbonitride).

The applicant argues that the examples in the Iio is silent about the beta-t solid solution comprising TiC, TiN, Ta carbonitride and Nb carbonitride. The Examiner respectfully submits that A reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. In re Opprecht 12 USPQ 2d 1235, 1236 (CAFC 1989); In re Bode USPQ 12; In re Lamberti 192 USPQ 278; In re Bozek 163 USPQ 54

Applicant argues that Iio is silent about the Nb and Ta ratio in the examples. The Examiner respectfully submits that a reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. In re

Opprecht 12 USPQ 2d 1235, 1236 (CAFC 1989); In re Bode USPQ 12; In re Lamberti 192 USPQ 278; In re Bozek 163 USPQ 54. Iio et al. disclose that the Ta can be replaced by Nb.

The applicant argues that the Iio is silent about the fracture toughness. The Examiner respectfully submits that similar product has similar property. Furthermore, the applicant fails to provide any factual evidence to show the contrary. Attorney's argument can not take place of the evidence.

The applicant argues the intended use of the composition. The Examiner respectfully submits a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHUANGYI ABU ALI whose telephone number is (571)272-6453. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENGO/
Supervisory Patent Examiner, Art Unit 1793

/Shuangyi Abu-Ali/
Examiner, Art Unit 1793